DMX REFERENCE

W350

CKC Lighting



Manufacturer	CKC Lighting
GDTF file	CKC_Lighting_W350_117067.gdtf
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1 About this manual

This document describes the W350 by CKC Lighting. It was compiled from the GDTF file CKC_Lighting_W350_117067.gdtf from the GDTF-Share library.

File revision: “Revision 1”.

The DMX modes, the channel functions and the technical data are given as the GDTF file states them. Installation, operation from the device's control panel, service and safety instructions are described in the manufacturer's original user manual, which takes precedence over this document.

This document was not issued or endorsed by CKC Lighting; product names and trademarks belong to their owners.

Safety notices are marked with signal words according to the severity of the hazard: DANGER – an imminent hazard that will result in death or serious injury; WARNING – a potential hazard that could result in death or serious injury; CAUTION – a potential hazard that could result in minor injury or property damage; NOTE – additional information for correct and safe use.

> **NOTE** This product is designed for stage and effect lighting. It is not suitable for household room illumination.

2 Quick reference

Parameter	Value
Weight	9.5 kg

DMX modes

Mode	Channels	Units in one universe	First start addresses
Ext-Cells 56CH	56	9	1, 57, 113, 169, ...
Cells 50CH	50	10	1, 51, 101, 151, ...
Cells 48CH	48	10	1, 49, 97, 145, ...
Extended 16CH	16	32	1, 17, 33, 49, ...
16bit Dim 10CH	10	51	1, 11, 21, 31, ...
16bit 8CH	8	64	1, 9, 17, 25, ...
8bit 4CH	4	128	1, 5, 9, 13, ...
RGB 3CH	3	170	1, 4, 7, 10, ...
HSI-Ext 10CH	10	51	1, 11, 21, 31, ...
HSI 4CH	4	128	1, 5, 9, 13, ...
HSI Cell 26CH	26	19	1, 27, 53, 79, ...



Read the manual before use



Do not stare into the light



Indoor use only

3 Safety instructions



Read the manual before use



Do not stare into the light



Indoor use only

⚠ WARNING

- This device is intended for professional use. Installation, connection, setup and maintenance must be carried out only by suitably qualified persons who have read this manual.
- Use the device only for its intended purpose and as described in this manual.
- Do not open the housing and do not modify or tamper with the device. Refer all repairs to an authorized service center.
- Do not use the device if its housing, power or data cable, or a connector is damaged, if the device has been dropped, or if liquid or a foreign object has entered it. In such a case, have it checked by a service center.
- Disconnect the device from the power supply before cleaning, maintenance or any work on the connections.
- After moving the device from a cold to a warm environment, let it reach room temperature before switching it on to prevent condensation inside.
- The device is not a toy; keep it out of the reach of children.

⚠ WARNING

- This device is designed for indoor use only. Protect it from rain, splashing water, moisture and dust, and do not place containers with liquids on it.
- Do not operate the device in high humidity, near water, or where condensation can form on it.

⚠ CAUTION

- This device emits intense light. Do not look directly into the light source or the beam at close range; doing so may damage your eyes.
- Do not aim the beam at the eyes of people or animals at close range, and do not view the light source through optical instruments (binoculars, camera lenses).
- Do not aim the beam at flammable or heat-sensitive materials at close range.

⚠ CAUTION

- Strobe and fast flashing light effects can trigger epileptic seizures in susceptible people (photosensitive epilepsy) and can cause nausea or disorientation.
- Inform the audience and performers in advance that strobe effects will be used, for example with a notice at the entrance, and do not use them longer than necessary.

4 Installation

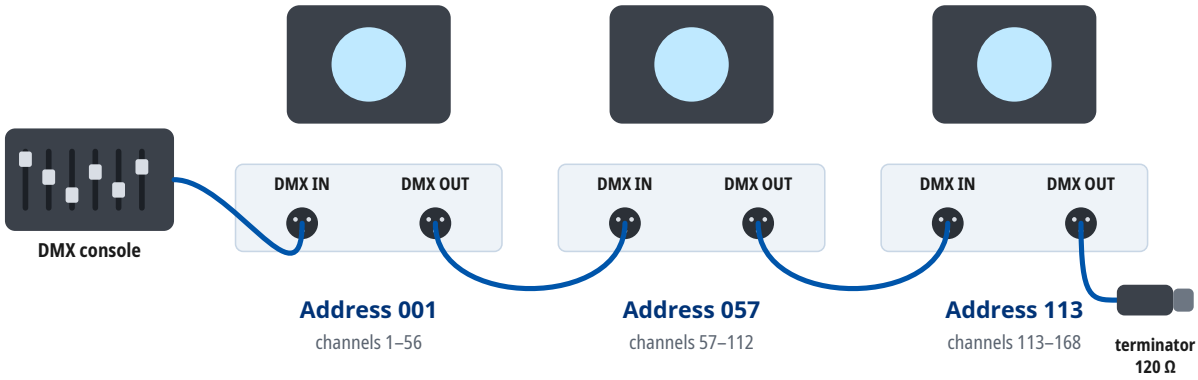
⚠ **WARNING**

- Rigging must be carried out only by qualified persons in accordance with applicable regulations, in particular those for work at height.
- The supporting structure and fixings must safely carry the weight of all suspended devices; verify their load capacity in advance.
- Weight of the device: 9.5 kg.
- Use suitable mounting hardware (for example truss clamps) and tighten all screw connections properly.
- Always secure the suspended device against falling with a safety cable of adequate load capacity, routed through a fixed point of the device and around the supporting structure.
- During installation and removal, keep people out of the area below the work position.
- Regularly inspect the fixings and the safety cable for damage, corrosion and loosening.

5 Connections

- Use shielded cable designed for DMX512 with an impedance of 110 Ω. Ordinary microphone cable is not suitable for DMX, especially over longer distances.
- Connect the devices in a daisy chain: connect the DMX OUT of one device to the DMX IN of the next. Do not split the line with Y-cables or wire it in a star; the line may be split only with a DMX splitter.
- Connect the shield to pin 1 only. Do not connect the shield (ground) to the metal shell of the connector; this can cause short circuits or erratic behavior.
- XLR pin assignment: pin 1 – shield (ground), pin 2 – Data- (Data Complement), pin 3 – Data+ (Data True). On 5-pin connectors, pins 4 and 5 are not connected; a 5-pin connector can be connected to a 3-pin one with a cable adapter.
- Terminate the end of the line (for impedance matching): plug an XLR connector with a 120 Ω, ¼ W resistor between pins 2 and 3 into the DMX OUT of the last device. This reduces the risk of erratic behavior.
- Connect no more than 32 devices to one DMX line. For more devices or longer runs, use a DMX splitter or booster.

DMX line



Mode Ext-Cells 56CH: every unit occupies 56 channels from its address. At most 32 units on one line; for more units or longer runs use a DMX splitter. A 120 Ω terminator closes the last DMX OUT.

6 Operation

Setting the DMX address

- The device occupies as many consecutive channels in the DMX universe as the selected DMX mode uses, starting at the set start address.
- Number of channels occupied in the DMX mode “Ext-Cells 56CH”: 56.
- Choose start addresses so that the channels of individual devices do not overlap and the last occupied channel does not exceed 512. Devices with the same start address and mode respond identically.
- For several devices in a row in the DMX mode “Ext-Cells 56CH”, you can use, for example, the start addresses 1, 57, 113, 169.
- The DMX mode set on the device must match the fixture profile (personality) used in the controller.

7 Functions at a glance

Functions in each DMX mode

	Ext-Cells 56CH 56 channels	Cells 50CH 50 channels	Cells 48CH 48 channels	Extended 16CH 16 channels	16bit Dim 10CH 10 channels	16bit 8CH 8 channels	8bit 4CH 4 channels	RGB 3CH 3 channels
Dimmer	2	1		2	1			
Shutter / strobe	1			1				
Color mixing	24× (9–55)	24× (3–49)	24× (1–47)	4× (9–15)	4× (3–9)	4× (1–7)	1–4	1–3
Color wheel	8			8				
Effects / macros	5–7			5–7				
Pixel control	✓	✓	✓					

Color wheel

1 Color Macro 1
DMX 1–4

2 Color Macro 2
DMX 5–8

3 Color Macro 3
DMX 9–12

4 Color Macro 4
DMX 13–16

5 Color Macro 5
DMX 17–20

6 Color Macro 6
DMX 21–24

7 Color Macro 7
DMX 25–28

8 Color Macro 8
DMX 29–32

9 Color Macro 9
DMX 33–36

10 Color Macro 10
DMX 37–40

11 Color Macro 11
DMX 41–44

12 Color Macro 12
DMX 45–48

13 Color Macro 13
DMX 49–52

14 Color Macro 14
DMX 53–56

15 Color Macro 15
DMX 57–60

16 Color Macro 16
DMX 61–64

17 Color Macro 17
DMX 65–68

18 Color Macro 18
DMX 69–72

19 Color Macro 19
DMX 73–76

20 Color Macro 20
DMX 77–80

21 Color Macro 21
DMX 81–84

22 Color Macro 22
DMX 85–88

23 Color Macro 23
DMX 89–92

24 Color Macro 24
DMX 93–96

25 Color Macro 25
DMX 97–100

26 Color Macro 26
DMX 101–104

27 Color Macro 27
DMX 105–108

28 Color Macro 28
DMX 109–112

29 Color Macro 29
DMX 113–116

30 Color Macro 30
DMX 117–120

31 Color Macro 31
DMX 121–124

32 Color Macro 32
DMX 125–128

33 Color Macro 33
DMX 129–132

34 Color Macro 34
DMX 133–136

35 Color Macro 35
DMX 137–140

36 Color Macro 36
DMX 141–144

37 Color Macro 37
DMX 145–148

38 Color Macro 38
DMX 149–152

39 Color Macro 39
DMX 153–156

40 Color Macro 40
DMX 157–160

41 Color Macro 41
DMX 161–164

42 Color Macro 42
DMX 165–168

43 Color Macro 43
DMX 169–172

44 Color Macro 44
DMX 173–176

45 Color Macro 45
DMX 177–180

46 Color Macro 46
DMX 181–184

47 Color Macro 47
DMX 185–188

48 Color Macro 48
DMX 189–192

49 Color Macro 49
DMX 193–196

50 Color Macro 50
DMX 197–200

51 Color Macro 51
DMX 201–204

52 Color Macro 52
DMX 205–208

53 Color Macro 53
DMX 209–212

54 Color Macro 54
DMX 213–216

55 Color Macro 55
DMX 217–220

56 Color Macro 56
DMX 221–224

57 Color Macro 57
DMX 225–228

58 Color Macro 58
DMX 229–232

59 Color Macro 59
DMX 233–236

60 Color Macro 60
DMX 237–240

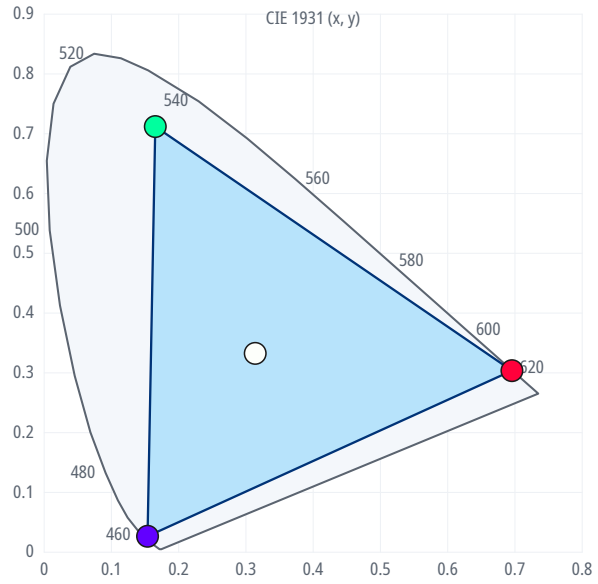
61 Color Macro 61
DMX 241–244

62 Color Macro 62
DMX 245–248

63 Color Macro 63
DMX 249–252

64 Off
DMX 0

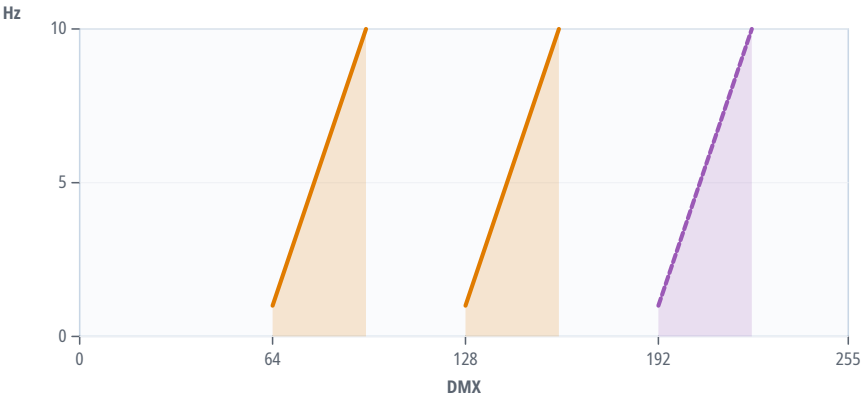
LED colors and the colors they mix



LED	x	y	nm
Red	0.696	0.304	623
Green	0.165	0.712	530
Blue	0.154	0.027	463
White	0.314	0.333	

The shaded area holds the colors the LEDs can mix; the dots are the LED colors the GDTF file states.

Strobe rate



CH 1 · Ext-Cells 56CH

64–95: 1–10 Hz
Strobe Effect Slow to Fast

128–159: 1–10 Hz
Pulse-Effect in Sequences

192–223: 1–10 Hz
Random Strobe Effect Slow to Fast

Cells (pixels)



6 cells where the GDTF file places them (seen from above), numbered by their first DMX channel (CH) in the mode “Ext-Cells 56CH”.

8 DMX channels

Units in one DMX universe



Start addresses of 20 units in the mode “Ext-Cells 56CH”

Unit	Start address	Unit	Start address	Unit	Start address	Unit	Start address
1	1	6	281	11	U2 · 57	16	U2 · 337
2	57	7	337	12	U2 · 113	17	U2 · 393
3	113	8	393	13	U2 · 169	18	U2 · 449
4	169	9	449	14	U2 · 225	19	U3 · 1
5	225	10	U2 · 1	15	U2 · 281	20	U3 · 57

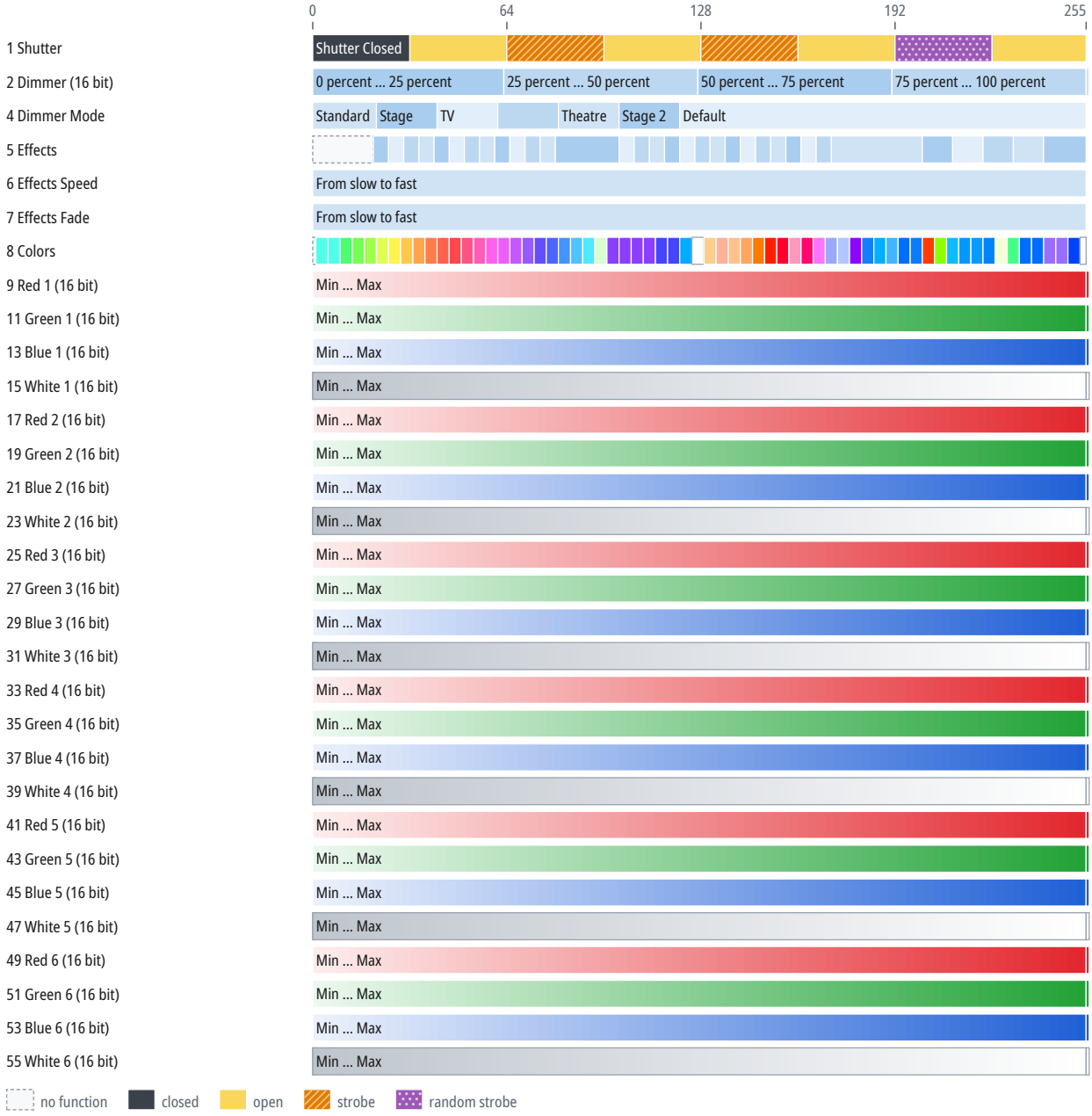
Where a DMX universe is full, the next units continue in the next universe: “U2 · 1” is address 1 in the second universe, counted from the universe of the first unit.

Mode Ext-Cells 56CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 47, CH 2 Dimmer 255, CH 9 Red 1 255, CH 11 Green 1 255, CH 13 Blue 1 255, CH 15 White 1 255, CH 17 Red 2 255, CH 19 Green 2 255, CH 21 Blue 2 255, CH 23 White 2 255, CH 25 Red 3 255, CH 27 Green 3 255, CH 29 Blue 3 255, CH 31 White 3 255, CH 33 Red 4 255, CH 35 Green 4 255, CH 37 Blue 4 255, CH 39 White 4 255, CH 41 Red 5 255, CH 43 Green 5 255, CH 45 Blue 5 255, CH 47 White 5 255, CH 49 Red 6 255, CH 51 Green 6 255, CH 53 Blue 6 255, CH 55 White 6 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Shutter	0–31	Shutter Closed
		32–63	No Function (Shutter Open)
		64–95	Strobe Effect Slow to Fast (1–10 Hz)
		96–127	No Function (Shutter Open)
		128–159	Pulse-Effect in Sequences (1–10 Hz)
		160–191	No Function (Shutter Open)
		192–223	Random Strobe Effect Slow to Fast (1–10 Hz)
		224–255	No Function (Shutter Open)
2	Dimmer	0–63	0 percent ... 25 percent
		63–127	25 percent ... 50 percent
		127–191	50 percent ... 75 percent
		191–255	75 percent ... 100 percent
		255	100 percent
3	Dimmer Fine	0–255	Fine adjustment of CH 2
4	Dimmer Mode	0–20	Standard
		21–40	Stage
		41–60	TV
		61–80	Architectural
		81–100	Theatre
		101–120	Stage 2
		121–255	Default
5	Effects	0–19	Auto Programs: Off
		20–24	Program 1
		25–29	Program 2
		30–34	Program 3
		35–39	Program 4
		40–44	Program 5
		45–49	Program 6
		50–54	Program 7
		55–59	Program 8
		60–64	Program 9
		65–69	Program 10
		70–74	Program 11
		75–79	Program 12
		80–100	Refresh Rates: Idle
		101–105	900 (900–3571 Hz)
		106–110	1000
		111–115	1100
		116–120	1200 (default)
		121–125	1300
		126–130	1400

CH	Function	DMX	Description
5	Effects (continued)	131–135	1500
		136–140	2500
		141–145	4000
		146–150	5000
		151–155	10000
		156–160	15000
		161–165	20000
		166–170	25000
		171–200	Refresh Rates: Idle
		201–210	Linear (default)
		211–220	Square
		221–230	Inverse Square
		231–240	S-Curve
		241–255	Dimmer Curve: Idle
6	Effects Speed		Auto Program Speed
		0–255	From slow to fast
7	Effects Fade		Auto Program Fade
		0–255	From slow to fast
8	Colors		Color Macro
		0	Off
		1–4	Color Macro 1
		5–8	Color Macro 2
		9–12	Color Macro 3
		13–16	Color Macro 4
		17–20	Color Macro 5
		21–24	Color Macro 6
		25–28	Color Macro 7
		29–32	Color Macro 8
		33–36	Color Macro 9
		37–40	Color Macro 10
		41–44	Color Macro 11
		45–48	Color Macro 12
		49–52	Color Macro 13
		53–56	Color Macro 14
		57–60	Color Macro 15
		61–64	Color Macro 16
		65–68	Color Macro 17
		69–72	Color Macro 18
		73–76	Color Macro 19
		77–80	Color Macro 20
		81–84	Color Macro 21
		85–88	Color Macro 22

CH	Function	DMX	Description
8	Colors (continued)	89–92	Color Macro 23
		93–96	Color Macro 24
		97–100	Color Macro 25
		101–104	Color Macro 26
		105–108	Color Macro 27
		109–112	Color Macro 28
		113–116	Color Macro 29
		117–120	Color Macro 30
		121–124	Color Macro 31
		125–128	Color Macro 32
		129–132	Color Macro 33
		133–136	Color Macro 34
		137–140	Color Macro 35
		141–144	Color Macro 36
		145–148	Color Macro 37
		149–152	Color Macro 38
		153–156	Color Macro 39
		157–160	Color Macro 40
		161–164	Color Macro 41
		165–168	Color Macro 42
		169–172	Color Macro 43
		173–176	Color Macro 44
		177–180	Color Macro 45
		181–184	Color Macro 46
		185–188	Color Macro 47
		189–192	Color Macro 48
		193–196	Color Macro 49
		197–200	Color Macro 50
		201–204	Color Macro 51
		205–208	Color Macro 52
		209–212	Color Macro 53
		213–216	Color Macro 54
		217–220	Color Macro 55
		221–224	Color Macro 56
		225–228	Color Macro 57
		229–232	Color Macro 58
		233–236	Color Macro 59
		237–240	Color Macro 60
		241–244	Color Macro 61
		245–248	Color Macro 62
		249–252	Color Macro 63
		253–255	Color Macro 64

CH	Function	DMX	Description
9	Red 1	0–255	Min … Max
		255	Max
10	Red 1 Fine	0–255	Fine adjustment of CH 9
11	Green 1	0–255	Min … Max
		255	Max
12	Green 1 Fine	0–255	Fine adjustment of CH 11
13	Blue 1	0–255	Min … Max
		255	Max
14	Blue 1 Fine	0–255	Fine adjustment of CH 13
15	White 1	0–255	Min … Max
		255	Max
16	White 1 Fine	0–255	Fine adjustment of CH 15
17	Red 2	0–255	Min … Max
		255	Max
18	Red 2 Fine	0–255	Fine adjustment of CH 17
19	Green 2	0–255	Min … Max
		255	Max
20	Green 2 Fine	0–255	Fine adjustment of CH 19
21	Blue 2	0–255	Min … Max
		255	Max
22	Blue 2 Fine	0–255	Fine adjustment of CH 21
23	White 2	0–255	Min … Max
		255	Max
24	White 2 Fine	0–255	Fine adjustment of CH 23
25	Red 3	0–255	Min … Max
		255	Max
26	Red 3 Fine	0–255	Fine adjustment of CH 25
27	Green 3	0–255	Min … Max
		255	Max
28	Green 3 Fine	0–255	Fine adjustment of CH 27
29	Blue 3	0–255	Min … Max
		255	Max
30	Blue 3 Fine	0–255	Fine adjustment of CH 29
31	White 3	0–255	Min … Max
		255	Max
32	White 3 Fine	0–255	Fine adjustment of CH 31
33	Red 4	0–255	Min … Max
		255	Max
34	Red 4 Fine	0–255	Fine adjustment of CH 33
35	Green 4	0–255	Min … Max
		255	Max
36	Green 4 Fine	0–255	Fine adjustment of CH 35

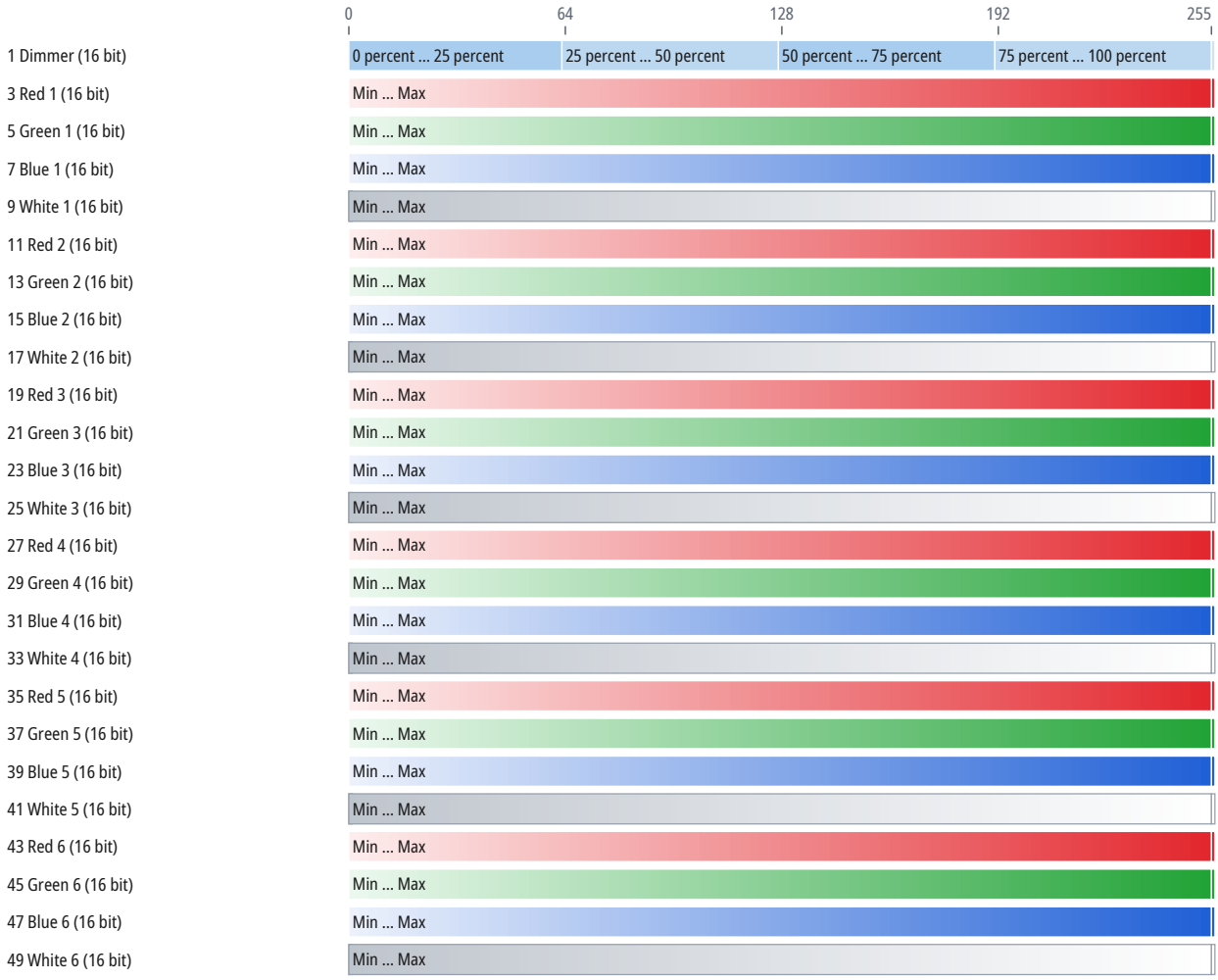
CH	Function	DMX	Description
37	Blue 4	0–255	Min … Max
		255	Max
38	Blue 4 Fine	0–255	Fine adjustment of CH 37
39	White 4	0–255	Min … Max
		255	Max
40	White 4 Fine	0–255	Fine adjustment of CH 39
41	Red 5	0–255	Min … Max
		255	Max
42	Red 5 Fine	0–255	Fine adjustment of CH 41
43	Green 5	0–255	Min … Max
		255	Max
44	Green 5 Fine	0–255	Fine adjustment of CH 43
45	Blue 5	0–255	Min … Max
		255	Max
46	Blue 5 Fine	0–255	Fine adjustment of CH 45
47	White 5	0–255	Min … Max
		255	Max
48	White 5 Fine	0–255	Fine adjustment of CH 47
49	Red 6	0–255	Min … Max
		255	Max
50	Red 6 Fine	0–255	Fine adjustment of CH 49
51	Green 6	0–255	Min … Max
		255	Max
52	Green 6 Fine	0–255	Fine adjustment of CH 51
53	Blue 6	0–255	Min … Max
		255	Max
54	Blue 6 Fine	0–255	Fine adjustment of CH 53
55	White 6	0–255	Min … Max
		255	Max
56	White 6 Fine	0–255	Fine adjustment of CH 55

Mode Cells 50CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Red 1 255, CH 5 Green 1 255, CH 7 Blue 1 255, CH 9 White 1 255, CH 11 Red 2 255, CH 13 Green 2 255, CH 15 Blue 2 255, CH 17 White 2 255, CH 19 Red 3 255, CH 21 Green 3 255, CH 23 Blue 3 255, CH 25 White 3 255, CH 27 Red 4 255, CH 29 Green 4 255, CH 31 Blue 4 255, CH 33 White 4 255, CH 35 Red 5 255, CH 37 Green 5 255, CH 39 Blue 5 255, CH 41 White 5 255, CH 43 Red 6 255, CH 45 Green 6 255, CH 47 Blue 6 255, CH 49 White 6 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Dimmer		Same as CH 2 in the mode “Ext-Cells 56CH” (p. 12)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Red 1		Same as CH 9 in the mode “Ext-Cells 56CH” (p. 15)
4	Red 1 Fine	0–255	Fine adjustment of CH 3
5	Green 1		Same as CH 11 in the mode “Ext-Cells 56CH” (p. 15)
6	Green 1 Fine	0–255	Fine adjustment of CH 5
7	Blue 1		Same as CH 13 in the mode “Ext-Cells 56CH” (p. 15)
8	Blue 1 Fine	0–255	Fine adjustment of CH 7
9	White 1		Same as CH 15 in the mode “Ext-Cells 56CH” (p. 15)

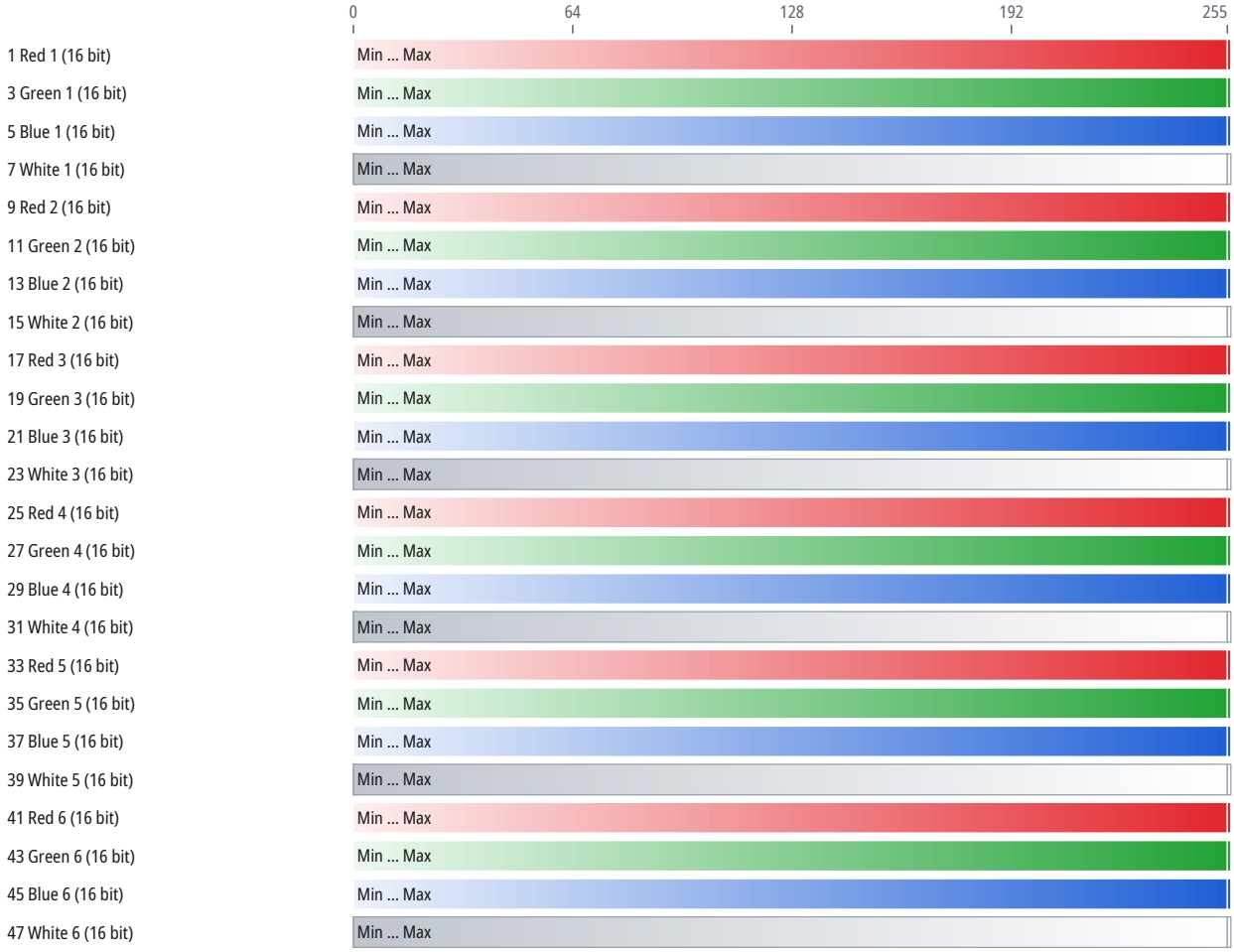
CH	Function	DMX	Description
10	White 1 Fine	0–255	Fine adjustment of CH 9
11	Red 2		Same as CH 17 in the mode “Ext-Cells 56CH” (p. 15)
12	Red 2 Fine	0–255	Fine adjustment of CH 11
13	Green 2		Same as CH 19 in the mode “Ext-Cells 56CH” (p. 15)
14	Green 2 Fine	0–255	Fine adjustment of CH 13
15	Blue 2		Same as CH 21 in the mode “Ext-Cells 56CH” (p. 15)
16	Blue 2 Fine	0–255	Fine adjustment of CH 15
17	White 2		Same as CH 23 in the mode “Ext-Cells 56CH” (p. 15)
18	White 2 Fine	0–255	Fine adjustment of CH 17
19	Red 3		Same as CH 25 in the mode “Ext-Cells 56CH” (p. 15)
20	Red 3 Fine	0–255	Fine adjustment of CH 19
21	Green 3		Same as CH 27 in the mode “Ext-Cells 56CH” (p. 15)
22	Green 3 Fine	0–255	Fine adjustment of CH 21
23	Blue 3		Same as CH 29 in the mode “Ext-Cells 56CH” (p. 15)
24	Blue 3 Fine	0–255	Fine adjustment of CH 23
25	White 3		Same as CH 31 in the mode “Ext-Cells 56CH” (p. 15)
26	White 3 Fine	0–255	Fine adjustment of CH 25
27	Red 4		Same as CH 33 in the mode “Ext-Cells 56CH” (p. 15)
28	Red 4 Fine	0–255	Fine adjustment of CH 27
29	Green 4		Same as CH 35 in the mode “Ext-Cells 56CH” (p. 15)
30	Green 4 Fine	0–255	Fine adjustment of CH 29
31	Blue 4		Same as CH 37 in the mode “Ext-Cells 56CH” (p. 16)
32	Blue 4 Fine	0–255	Fine adjustment of CH 31
33	White 4		Same as CH 39 in the mode “Ext-Cells 56CH” (p. 16)
34	White 4 Fine	0–255	Fine adjustment of CH 33
35	Red 5		Same as CH 41 in the mode “Ext-Cells 56CH” (p. 16)
36	Red 5 Fine	0–255	Fine adjustment of CH 35
37	Green 5		Same as CH 43 in the mode “Ext-Cells 56CH” (p. 16)
38	Green 5 Fine	0–255	Fine adjustment of CH 37
39	Blue 5		Same as CH 45 in the mode “Ext-Cells 56CH” (p. 16)
40	Blue 5 Fine	0–255	Fine adjustment of CH 39
41	White 5		Same as CH 47 in the mode “Ext-Cells 56CH” (p. 16)
42	White 5 Fine	0–255	Fine adjustment of CH 41
43	Red 6		Same as CH 49 in the mode “Ext-Cells 56CH” (p. 16)
44	Red 6 Fine	0–255	Fine adjustment of CH 43
45	Green 6		Same as CH 51 in the mode “Ext-Cells 56CH” (p. 16)
46	Green 6 Fine	0–255	Fine adjustment of CH 45
47	Blue 6		Same as CH 53 in the mode “Ext-Cells 56CH” (p. 16)
48	Blue 6 Fine	0–255	Fine adjustment of CH 47
49	White 6		Same as CH 55 in the mode “Ext-Cells 56CH” (p. 16)
50	White 6 Fine	0–255	Fine adjustment of CH 49

Mode Cells 48CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 1 Red 1 255, CH 3 Green 1 255, CH 5 Blue 1 255, CH 7 White 1 255, CH 9 Red 2 255, CH 11 Green 2 255, CH 13 Blue 2 255, CH 15 White 2 255, CH 17 Red 3 255, CH 19 Green 3 255, CH 21 Blue 3 255, CH 23 White 3 255, CH 25 Red 4 255, CH 27 Green 4 255, CH 29 Blue 4 255, CH 31 White 4 255, CH 33 Red 5 255, CH 35 Green 5 255, CH 37 Blue 5 255, CH 39 White 5 255, CH 41 Red 6 255, CH 43 Green 6 255, CH 45 Blue 6 255, CH 47 White 6 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Red 1		Same as CH 9 in the mode “Ext-Cells 56CH” (p. 15)
2	Red 1 Fine	0–255	Fine adjustment of CH 1
3	Green 1		Same as CH 11 in the mode “Ext-Cells 56CH” (p. 15)
4	Green 1 Fine	0–255	Fine adjustment of CH 3
5	Blue 1		Same as CH 13 in the mode “Ext-Cells 56CH” (p. 15)
6	Blue 1 Fine	0–255	Fine adjustment of CH 5
7	White 1		Same as CH 15 in the mode “Ext-Cells 56CH” (p. 15)
8	White 1 Fine	0–255	Fine adjustment of CH 7
9	Red 2		Same as CH 17 in the mode “Ext-Cells 56CH” (p. 15)
10	Red 2 Fine	0–255	Fine adjustment of CH 9

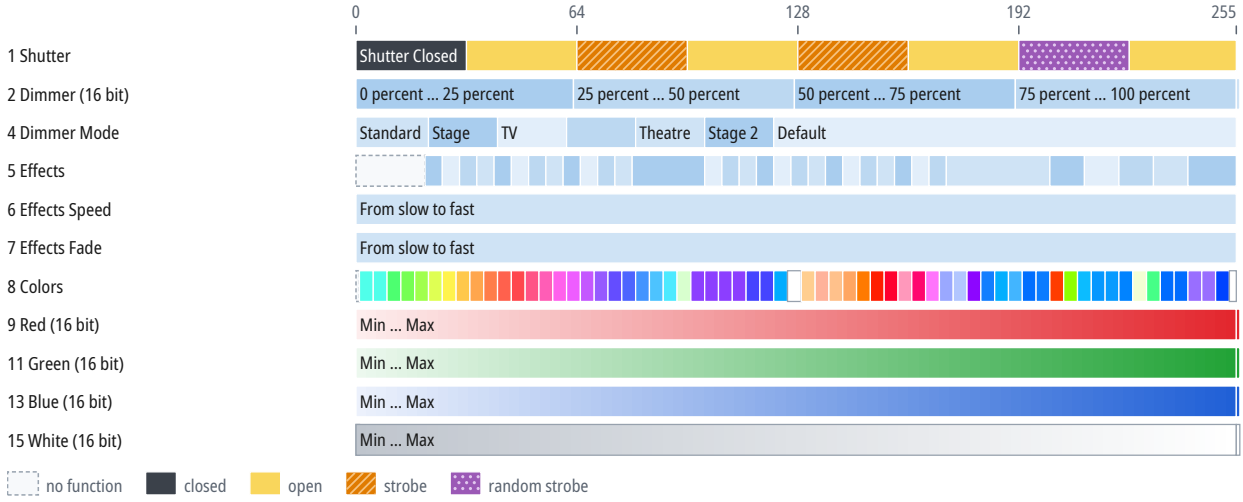
CH	Function	DMX	Description
11	Green 2		Same as CH 19 in the mode “Ext-Cells 56CH” (p. 15)
12	Green 2 Fine	0–255	Fine adjustment of CH 11
13	Blue 2		Same as CH 21 in the mode “Ext-Cells 56CH” (p. 15)
14	Blue 2 Fine	0–255	Fine adjustment of CH 13
15	White 2		Same as CH 23 in the mode “Ext-Cells 56CH” (p. 15)
16	White 2 Fine	0–255	Fine adjustment of CH 15
17	Red 3		Same as CH 25 in the mode “Ext-Cells 56CH” (p. 15)
18	Red 3 Fine	0–255	Fine adjustment of CH 17
19	Green 3		Same as CH 27 in the mode “Ext-Cells 56CH” (p. 15)
20	Green 3 Fine	0–255	Fine adjustment of CH 19
21	Blue 3		Same as CH 29 in the mode “Ext-Cells 56CH” (p. 15)
22	Blue 3 Fine	0–255	Fine adjustment of CH 21
23	White 3		Same as CH 31 in the mode “Ext-Cells 56CH” (p. 15)
24	White 3 Fine	0–255	Fine adjustment of CH 23
25	Red 4		Same as CH 33 in the mode “Ext-Cells 56CH” (p. 15)
26	Red 4 Fine	0–255	Fine adjustment of CH 25
27	Green 4		Same as CH 35 in the mode “Ext-Cells 56CH” (p. 15)
28	Green 4 Fine	0–255	Fine adjustment of CH 27
29	Blue 4		Same as CH 37 in the mode “Ext-Cells 56CH” (p. 16)
30	Blue 4 Fine	0–255	Fine adjustment of CH 29
31	White 4		Same as CH 39 in the mode “Ext-Cells 56CH” (p. 16)
32	White 4 Fine	0–255	Fine adjustment of CH 31
33	Red 5		Same as CH 41 in the mode “Ext-Cells 56CH” (p. 16)
34	Red 5 Fine	0–255	Fine adjustment of CH 33
35	Green 5		Same as CH 43 in the mode “Ext-Cells 56CH” (p. 16)
36	Green 5 Fine	0–255	Fine adjustment of CH 35
37	Blue 5		Same as CH 45 in the mode “Ext-Cells 56CH” (p. 16)
38	Blue 5 Fine	0–255	Fine adjustment of CH 37
39	White 5		Same as CH 47 in the mode “Ext-Cells 56CH” (p. 16)
40	White 5 Fine	0–255	Fine adjustment of CH 39
41	Red 6		Same as CH 49 in the mode “Ext-Cells 56CH” (p. 16)
42	Red 6 Fine	0–255	Fine adjustment of CH 41
43	Green 6		Same as CH 51 in the mode “Ext-Cells 56CH” (p. 16)
44	Green 6 Fine	0–255	Fine adjustment of CH 43
45	Blue 6		Same as CH 53 in the mode “Ext-Cells 56CH” (p. 16)
46	Blue 6 Fine	0–255	Fine adjustment of CH 45
47	White 6		Same as CH 55 in the mode “Ext-Cells 56CH” (p. 16)
48	White 6 Fine	0–255	Fine adjustment of CH 47

Mode Extended 16CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 47, CH 2 Dimmer 255, CH 9 Red 255, CH 11 Green 255, CH 13 Blue 255, CH 15 White 255.

Channel functions at a glance



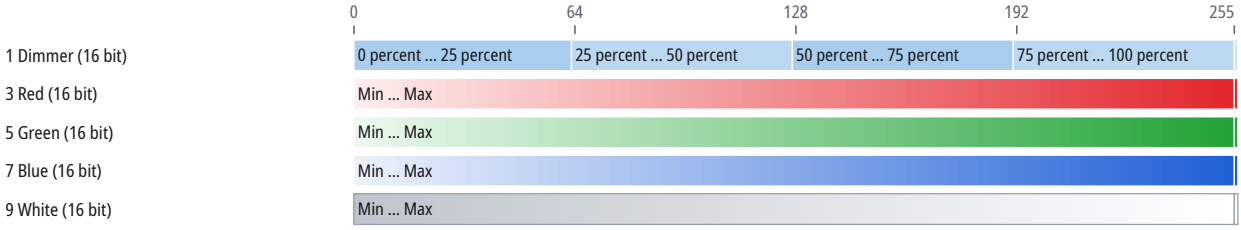
CH	Function	DMX	Description
1	Shutter		Same as CH 1 in the mode “Ext-Cells 56CH” (p. 12)
2	Dimmer		Same as CH 2 in the mode “Ext-Cells 56CH” (p. 12)
3	Dimmer Fine	0–255	Fine adjustment of CH 2
4	Dimmer Mode		Same as CH 4 in the mode “Ext-Cells 56CH” (p. 12)
5	Effects		Same as CH 5 in the mode “Ext-Cells 56CH” (p. 12)
6	Effects Speed		Same as CH 6 in the mode “Ext-Cells 56CH” (p. 13)
7	Effects Fade		Same as CH 7 in the mode “Ext-Cells 56CH” (p. 13)
8	Colors		Same as CH 8 in the mode “Ext-Cells 56CH” (p. 13)
9	Red	0–255	Min ... Max
		255	Max
10	Red Fine	0–255	Fine adjustment of CH 9
11	Green	0–255	Min ... Max
		255	Max
12	Green Fine	0–255	Fine adjustment of CH 11
13	Blue	0–255	Min ... Max
		255	Max
14	Blue Fine	0–255	Fine adjustment of CH 13
15	White	0–255	Min ... Max
		255	Max
16	White Fine	0–255	Fine adjustment of CH 15

Mode 16bit Dim 10CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 1 Dimmer 255, CH 3 Red 255, CH 5 Green 255, CH 7 Blue 255, CH 9 White 255.

Channel functions at a glance



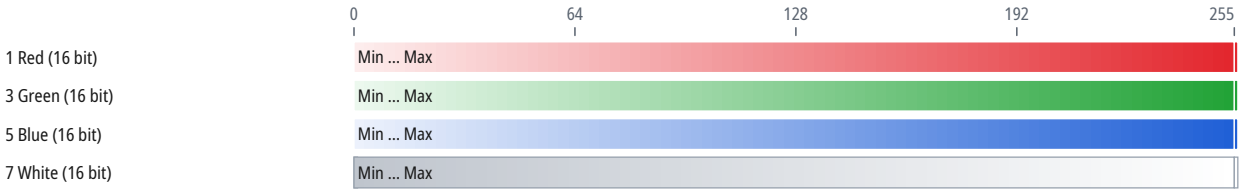
CH	Function	DMX	Description
1	Dimmer		Same as CH 2 in the mode “Ext-Cells 56CH” (p. 12)
2	Dimmer Fine	0–255	Fine adjustment of CH 1
3	Red		Same as CH 9 in the mode “Extended 16CH” (p. 21)
4	Red Fine	0–255	Fine adjustment of CH 3
5	Green		Same as CH 11 in the mode “Extended 16CH” (p. 21)
6	Green Fine	0–255	Fine adjustment of CH 5
7	Blue		Same as CH 13 in the mode “Extended 16CH” (p. 21)
8	Blue Fine	0–255	Fine adjustment of CH 7
9	White		Same as CH 15 in the mode “Extended 16CH” (p. 21)
10	White Fine	0–255	Fine adjustment of CH 9

Mode 16bit 8CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 3 Green 255, CH 5 Blue 255, CH 7 White 255.

Channel functions at a glance

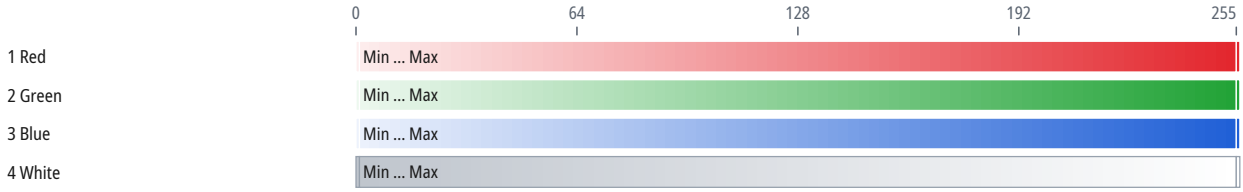


CH	Function	DMX	Description
1	Red		Same as CH 9 in the mode “Extended 16CH” (p. 21)
2	Red Fine	0–255	Fine adjustment of CH 1
3	Green		Same as CH 11 in the mode “Extended 16CH” (p. 21)
4	Green Fine	0–255	Fine adjustment of CH 3
5	Blue		Same as CH 13 in the mode “Extended 16CH” (p. 21)
6	Blue Fine	0–255	Fine adjustment of CH 5
7	White		Same as CH 15 in the mode “Extended 16CH” (p. 21)
8	White Fine	0–255	Fine adjustment of CH 7

Mode 8bit 4CH

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255, CH 4 White 255.

Channel functions at a glance

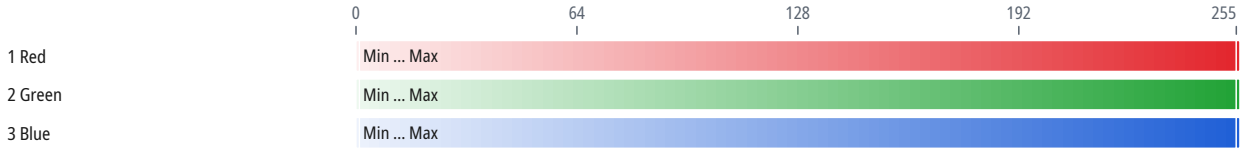


CH	Function	DMX	Description
1	Red	0	Min
		1–254	Min ... Max
		255	Max
2	Green	0	Min
		1–254	Min ... Max
		255	Max
3	Blue	0	Min
		1–254	Min ... Max
		255	Max
4	White	0	Min
		1–254	Min ... Max
		255	Max

Mode RGB 3CH

The GDTF file gives these values for a console's Highlight function: CH 1 Red 255, CH 2 Green 255, CH 3 Blue 255.

Channel functions at a glance



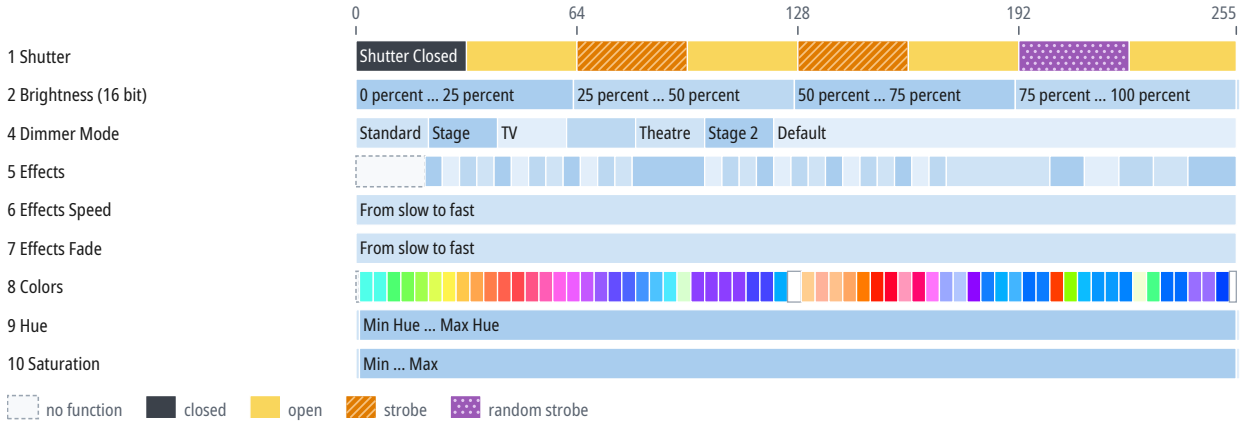
CH	Function	DMX	Description
1	Red		Same as CH 1 in the mode “8bit 4CH” (p. 23)
2	Green		Same as CH 2 in the mode “8bit 4CH” (p. 23)
3	Blue		Same as CH 3 in the mode “8bit 4CH” (p. 23)

Mode HSI-Ext 10CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 47.

Channel functions at a glance



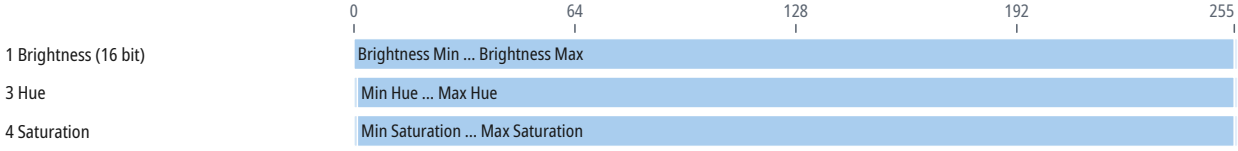
CH	Function	DMX	Description
1	Shutter		Same as CH 1 in the mode “Ext-Cells 56CH” (p. 12)
2	Brightness	0–63	0 percent ... 25 percent
		63–127	25 percent ... 50 percent
		127–191	50 percent ... 75 percent
		191–255	75 percent ... 100 percent
		255	100 percent
3	Brightness Fine	0–255	Fine adjustment of CH 2
4	Dimmer Mode		Same as CH 4 in the mode “Ext-Cells 56CH” (p. 12)
5	Effects		Same as CH 5 in the mode “Ext-Cells 56CH” (p. 12)
6	Effects Speed		Same as CH 6 in the mode “Ext-Cells 56CH” (p. 13)
7	Effects Fade		Same as CH 7 in the mode “Ext-Cells 56CH” (p. 13)
8	Colors		Same as CH 8 in the mode “Ext-Cells 56CH” (p. 13)

CH	Function	DMX	Description
9	Hue	0	Min Hue
		1–254	Min Hue … Max Hue
		255	Max Hue
10	Saturation	0	Min
		1–254	Min … Max
		255	Max

Mode HSI 4CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

Channel functions at a glance



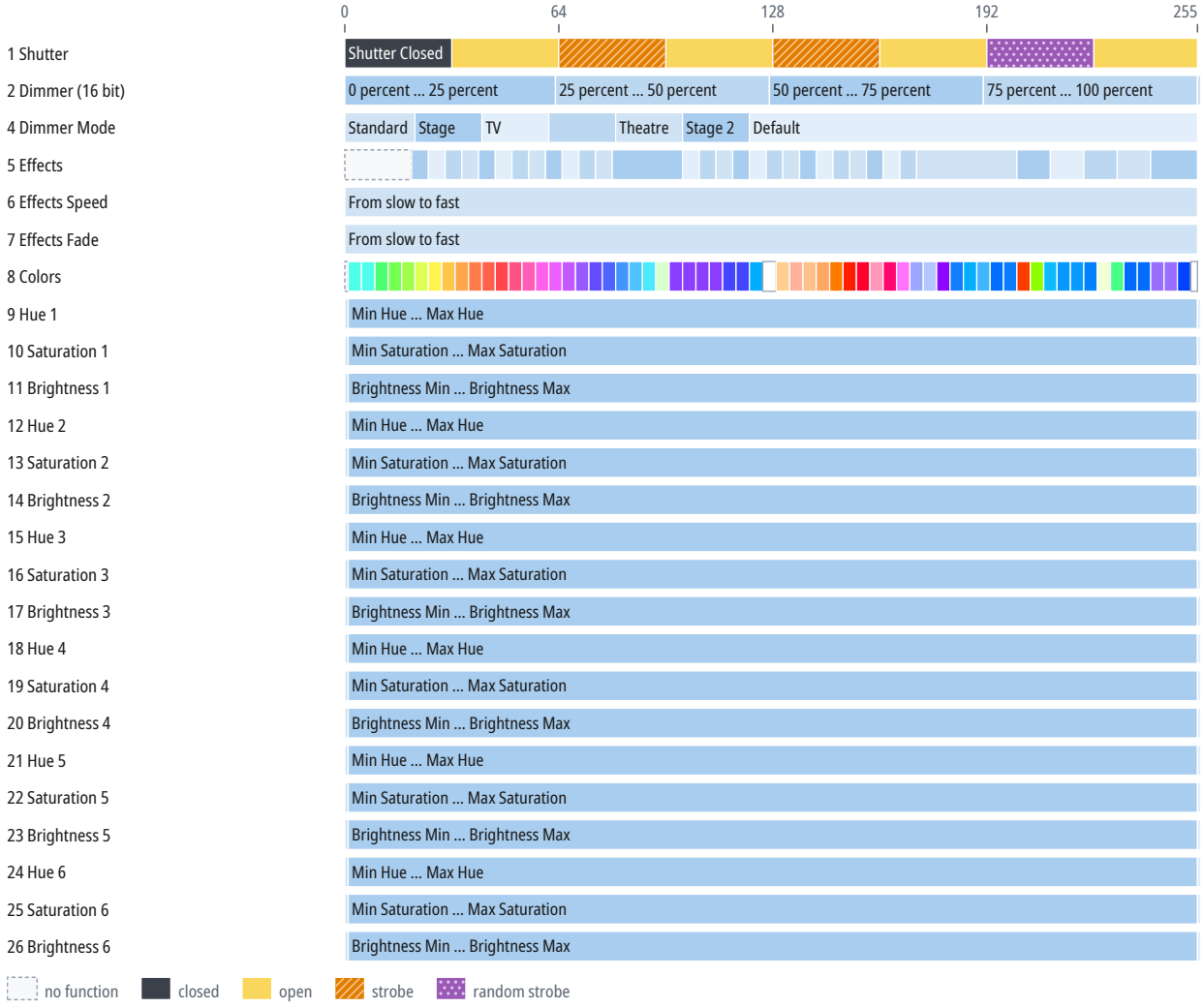
CH	Function	DMX	Description
1	Brightness	0–255	Brightness Min … Brightness Max
		255	Brightness Max
2	Brightness Fine	0–255	Fine adjustment of CH 1
3	Hue		Same as CH 9 in the mode “HSI-Ext 10CH” (p. 25)
4	Saturation	0	Min Saturation
		1–254	Min Saturation … Max Saturation
		255	Max Saturation

Mode HSI Cell 26CH

16-bit parameters use two channels, coarse and fine: value = 256 × coarse value + fine value.

The GDTF file gives these values for a console's Highlight function: CH 1 Shutter 47, CH 2 Dimmer 255.

Channel functions at a glance



CH	Function	DMX	Description
1	Shutter		Same as CH 1 in the mode “Ext-Cells 56CH” (p. 12)
2	Dimmer		Master Dimmer All beams
		0–63	0 percent ... 25 percent
		63–127	25 percent ... 50 percent
		127–191	50 percent ... 75 percent
		191–255	75 percent ... 100 percent
		255	100 percent
3	Dimmer Fine	0–255	Fine adjustment of CH 2
4	Dimmer Mode		Same as CH 4 in the mode “Ext-Cells 56CH” (p. 12)
5	Effects		Same as CH 5 in the mode “Ext-Cells 56CH” (p. 12)
6	Effects Speed		Same as CH 6 in the mode “Ext-Cells 56CH” (p. 13)

CH	Function	DMX	Description
7	Effects Fade		Same as CH 7 in the mode “Ext-Cells 56CH” (p. 13)
8	Colors		Same as CH 8 in the mode “Ext-Cells 56CH” (p. 13)
9	Hue 1	0	Min Hue
		1–254	Min Hue ... Max Hue
		255	Max Hue
10	Saturation 1	0	Min Saturation
		1–254	Min Saturation ... Max Saturation
		255	Max Saturation
11	Brightness 1	0	Brightness Min
		1–254	Brightness Min ... Brightness Max
		255	Brightness Max
12	Hue 2	0	Min Hue
		1–254	Min Hue ... Max Hue
		255	Max Hue
13	Saturation 2	0	Min Saturation
		1–254	Min Saturation ... Max Saturation
		255	Max Saturation
14	Brightness 2	0	Brightness Min
		1–254	Brightness Min ... Brightness Max
		255	Brightness Max
15	Hue 3	0	Min Hue
		1–254	Min Hue ... Max Hue
		255	Max Hue
16	Saturation 3	0	Min Saturation
		1–254	Min Saturation ... Max Saturation
		255	Max Saturation
17	Brightness 3	0	Brightness Min
		1–254	Brightness Min ... Brightness Max
		255	Brightness Max
18	Hue 4	0	Min Hue
		1–254	Min Hue ... Max Hue
		255	Max Hue
19	Saturation 4	0	Min Saturation
		1–254	Min Saturation ... Max Saturation
		255	Max Saturation
20	Brightness 4	0	Brightness Min
		1–254	Brightness Min ... Brightness Max
		255	Brightness Max
21	Hue 5	0	Min Hue
		1–254	Min Hue ... Max Hue
		255	Max Hue

CH	Function	DMX	Description
22	Saturation 5	0	Min Saturation
		1–254	Min Saturation … Max Saturation
		255	Max Saturation
23	Brightness 5	0	Brightness Min
		1–254	Brightness Min … Brightness Max
		255	Brightness Max
24	Hue 6	0	Min Hue
		1–254	Min Hue … Max Hue
		255	Max Hue
25	Saturation 6	0	Min Saturation
		1–254	Min Saturation … Max Saturation
		255	Max Saturation
26	Brightness 6	0	Brightness Min
		1–254	Brightness Min … Brightness Max
		255	Brightness Max

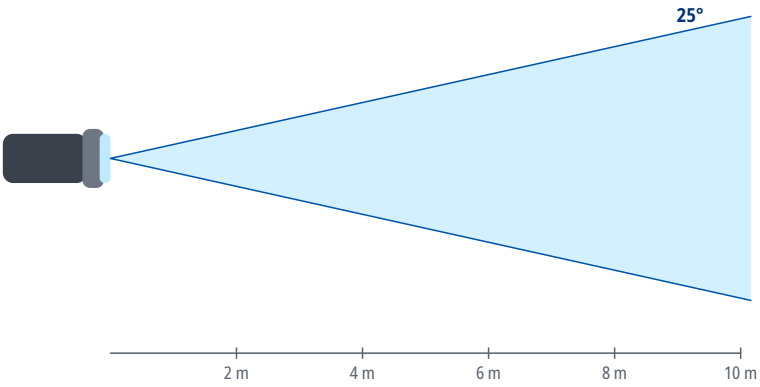
9 Technical specifications

Parameter	Value
Light source	LED
Weight	9.5 kg
Operating temperature	-20 to 45 °C

Speeds and ranges

Parameter	Value
Strobe frequency	1–10 Hz
LED frequency	0–25000 Hz

Spot diameter



Distance	Ø 25°
2 m	0.89 m
4 m	1.8 m
6 m	2.7 m
8 m	3.5 m
10 m	4.4 m
15 m	6.7 m

Spot diameter square to the beam axis, calculated from the beam angle.

10 Maintenance and cleaning

- Before cleaning and maintenance, switch the device off, disconnect it from the power supply and let it cool down.
- Clean the housing with a soft, dry or slightly damp cloth. Do not use solvents, abrasive cleaners or pressure washers, and make sure no liquid gets into the device.
- Clean optical parts (lenses, front glass), if the device has any, with a soft lint-free cloth and a cleaner intended for optics or glass.
- Regularly inspect the housing, cables, connectors and fixings. Have damaged parts replaced by a service center.
- How often to clean depends on the environment; dust, smoke and fog make the device dirty much faster.

11 Troubleshooting

Problem	Remedy
The device does not switch on	Check the supply voltage, the cables and the fuse, if the device has one.
The device does not respond to DMX	Check the start address, the selected DMX mode and whether it matches the profile in the controller, the cable connection to DMX IN, and the controller output (universe).
The device behaves erratically or flickers	Check the terminator at the end of the line, the condition and wiring of the cables (shield on pin 1 only), the number of devices on the line (32 at most), and that the line is not split without a splitter.
Only some devices on the line respond	Check the cable and connectors between the last working and the first non-working device, and make sure all devices on the line are switched on.
Devices respond to the wrong channels or affect each other	Check that the addresses do not overlap and that the DMX mode on the devices matches the patch in the controller.
The device or the connected load does not light up although it receives DMX	Check the values of the dimmer, shutter and strobe channels against the DMX channel table. For the DMX modes for which the sources state it, the chapter DMX channels gives under the mode's heading which channels must be open.

12 Disposal

The crossed-out wheeled bin symbol on the product, in the manual or on the packaging means that the product must not be disposed of with unsorted household waste at the end of its life.

Take the end-of-life equipment to a collection point, for example a municipal collection site or a retailer. Proper disposal enables materials to be recycled and helps prevent possible negative effects on the environment and human health.

Follow the regulations applicable in your country; in the Czech Republic, take-back is governed by Act No. 542/2020 Coll., on End-of-Life Products.

Recycle the packaging materials according to their type.